

REMARKS

The Office Action dated May 17, 2006, has been carefully reviewed, and in view of the following remarks reconsideration and allowance of all the claims pending in the application are respectfully requested.

The Rejection Under 35 U.S.C. § 102(b) Over Odagawa

Claims 1-7, 10-16 and 22-35 stand rejected under 35 U.S.C. § 102(b) as anticipated by Odagawa et al. (Odagawa), U.S. Patent No. 6,436,526.

This rejection is respectfully traversed. Applicants respectfully submit that the present invention according to any of claims 1-7, 10-16 and 22-35 is not anticipated by Odagawa.

In particular regarding claim 1, Odagawa does not disclose the claimed first layer formed from an amorphous material. Applicant respectfully submits that column 3, lines 59-61, of Odagawa discloses an amorphous magnetic film that includes at least one selected from the group consisting of CoFeB and CoMnB. Further, column 27, lines 41-45, of Odagawa discloses that two basic types of MR portions were produced by sputtering, but Odagawa does not disclose whether either or both of the two types of MR portions produced by sputtering were amorphous, or, for that matter, whether any portion of the two basic types of MR portions were amorphous. This is significant because sputtering can produce both amorphous materials and crystalline materials. In this regard, Odagawa provides no disclosure whether the two basic types of MR portions produced by sputtering were amorphous or crystalline. Further still, Odagawa provides no connection between the disclosure at column 3, lines 59-61, regarding an amorphous magnetic film and column 27, lines 41-45, regarding sputtering. Thus, the Examiner has not shown that Odagawa discloses the claimed first layer formed from an amorphous material.

Further regarding claim 1, Applicant respectfully traverses the Examiner's assertion that "the phrase 'wherein the interface layer material is crystalline wherein it is in isolation from both the first layer and the tunnel barrier layer' is merely process limitation." The Examiner has not shown such an assertion to be fact and, in that regard, Applicants respectfully request that the Examiner provide documentary evidence in the next Office Action that the phrase "the interface

layer material is crystalline when it is in isolation from both the first layer and the tunnel barrier layer” is merely a process limitation. In the absence of such documentary evidence, Applicants respectfully submit that Odagawa does not disclose that the interface layer material is crystalline when it is in isolation from both the claimed first layer and the claimed tunnel barrier layer.

Further still, while the Examiner asserts that Odagawa “interface layer 220 is formed of Co-Fe alloy, which is the same material being used in the instant application ... such that the interface layer is inherently crystalline when in isolation from both the first layer and the tunnel barrier layer”, the Examiner has not shown that the Odagawa Co-Fe alloy interface layer 220 is not amorphous when in isolation from the first layer and the tunnel barrier layer. In this regard, Applicants respectfully submit that column 27, lines 41-45, of Odagawa cited by the Examiner for the concept of an amorphous first layer also includes similar disclosure relating to the interface layer. Thus, Applicants respectfully submit that it would seem that the Examiner wants to have it both ways, that is, the Examiner wants the Odagawa disclosure relating to sputtering to produce an amorphous first layer and to produce an interface layer that is crystalline when in isolation from the first layer and the barrier layer.

Accordingly, claim 1 is allowable over Odagawa. It follows that claims 2-7, 10-16 and 22-24, which each incorporate the limitations of claim 1, are each allowable over Odagawa for at least the same reasons that claim 1 is considered allowable.

Regarding claim 25, Applicants respectfully submit that claim 25 is not anticipated by Odagawa for reasons that are similar to the reasons that claim 1 is considered allowable. It follows that claim 26, which incorporates the limitations of claim 25, is allowable over Odagawa for at least the same reasons that claim 25 is considered allowable.

Regarding claim 27, Applicants respectfully submit that claim 27 is allowable over Odagawa for reasons that are similar to the reasons that claim 1 is considered allowable. Further, claims 28-35, which each incorporate the limitations of claim 27, are each allowable for the reasons that claim 27 is considered allowable.

Consequently, Applicants respectfully request that the Examiner withdraw this rejection and allow claims 1-7, 10-16 and 22-35.

The Rejection Under 35 U.S.C. § 103(a) Over Odagawa In View Of Parkin

Claim 8 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Odagawa in view of Parkin, U.S. Patent No. 5,341,188.

This rejection is respectfully traversed. Applicants respectfully submit that the present invention according to claim 8 is patentable over Odagawa in view of Parkin. In particular, Applicants respectfully submit that Parkin does not cure the deficiencies of Odagawa with respect to claim 1, the base claim of claim 8.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claim 8.

The Rejection Under 35 U.S.C. § 103(a) Over Odagawa In View of Onodera

Claim 9 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Odagawa in view of Onodera et al. (Onodera), U.S. Publication No. 2002/0168550.

This rejection is respectfully traversed. Applicants respectfully submit that the present invention according to claim 9 is patentable over Odagawa in view of Onodera. Applicants respectfully submit that Onodera does not cure the deficiencies of Odagawa with respect to claim 1, the base claim of claim 9.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claim 9.

The Rejection Under 35 U.S.C. § 103(a) Over Odagawa

Claims 17 and 18 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Odagawa.

This rejection is respectfully traversed. Applicants respectfully submit that the present invention according to either of claims 17 and 18 is patentable over Odagawa. Accordingly, because claims 17 and 18 incorporate the limitations of claim 1, each of claims 17 and 18 is allowable for at least the same reasons that claim 1 is considered allowable.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claims 17 and 18.

The Rejection Under 35 U.S.C. § 103(a) Over Odagawa In View Of Saito

Claims 19-21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Odagawa in view of Saito et al. (Saito), U.S. Patent No. 6,556,473 B2.

This rejection is respectfully traversed. Applicants respectfully submit that the present invention according to any of claims 19-21 is patentable over Odagawa in view of Saito. Applicants respectfully submit that Saito does not cure the deficiencies of Odagawa with respect to claim 1, the base claim for each of claims 19-21.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claims 19-21.

CONCLUSION

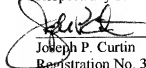
In view of the above arguments, it is urged that the present application is now in condition for allowance. Should the Examiner find that a telephonic or personal interview would expedite passage to issue of the present application, the Examiner is encouraged to contact the undersigned attorney at the telephone number indicated below.

A general authorization under 37 C.F.R. § 1.25(b), second sentence, is hereby given to credit or debit Deposit Account No. 09-0441 for the instant filing and for any other fees during the pendency of this application under 37 C.F.R. §§ 1.16, 1.17 and 1.18.

It is requested that this application be passed to issue with claims 1-35.

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Respectfully submitted,



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